In the Claims:

Please cancel claim 40 without prejudice or disclaimer.

Please amend the claims to read as follows:

1. (Currently Amended) A process for identifying an agent that modulates the activity of a cancer-related gene comprising:

(a) contacting a compound with a cell containing a gene that corresponds to a polynucleotide ~~having a sequence selected from the group consisting of SEQ ID NO: 1-583~~ whose expression is increased in a cancerous cell over that in a non-cancerous cell or a polynucleotide whose expression is elevated in a non-cancerous cell over that in a cancerous cell and under conditions ~~promoting~~ supporting the expression of said gene; and

(b) ~~detecting~~ determining a difference in expression of more than one said gene relative to when said compound is not present

wherein an increase in the expression of the determined genes whose expression is elevated in a non-cancerous cell over that in a cancerous cell and a decrease in the expression of the determined genes whose expression is increased in a cancerous cell over that in a non-cancerous cell

~~thereby identifying~~ identifies an agent that modulates the activity of a cancer-related gene.

2. (Currently Amended) The process of claim 1 wherein said ~~gene~~ polynucleotide has a sequence selected from the group consisting of SEQ ID NO: 1-583.

3. (Currently Amended) The process of claim 1 wherein the cell is a cancer cell~~,~~ ~~the sequence is selected from SEQ ID NO: 1-105~~ and the difference in expression is a decrease in expression.

4. (Currently Amended) The process of claim 1 wherein the cell is a cancer cell~~,~~

~~the sequence is selected from SEQ ID NO: 300-583~~ and the difference in expression is a decrease in expression.

5. (Currently Amended) The process of claim 2 wherein the cell is a cancer cell~~,~~ ~~the sequence is selected from SEQ ID NO: 1-105~~ and the difference in expression is a decrease in expression.

6. (Original) The process of claim 2 wherein the cell is a cancer cell, the sequence is selected from SEQ ID NO: 300-583 and the difference in expression is a decrease in expression.

7. (Currently Amended) The process of claim 3~~, 4, 5 or 6~~ wherein the cancer cell is a thyroid cancer cell.

8. (Currently Amended) The process of claim 3~~, 4, 5 or 6~~ wherein the cancer cell is a carcinoma cancer cell.

9. (Original) The process of claim 8 wherein the carcinoma is a thyroid carcinoma.

10. (original) The process of claim 9 wherein said carcinoma is papillary carcinoma.

11. (Currently Amended) The process of claim 1 wherein the cell is a non-cancerous cell~~, the sequence is selected from SEQ ID NO: 106-299~~ and the difference in expression is an increase in expression.

12. (Original) The process of claim 11 wherein the cell is a cell from thyroid.

13. (Currently Amended) The process of claim 2 wherein the cell is a non-

cancerous cell, the sequence is selected from SEQ ID NO: 106-299 and the difference in expression is ~~a decrease~~ an increase in expression.

14. (Original) The process of claim 13 wherein the cell is a cell from thyroid.

15. (Currently Amended) The process of claim 1 wherein the cell is a cancer cell~~, the sequence is selected from SEQ ID NO: 1-105~~ and the difference in expression is a decrease in expression.

16. (Currently Amended) The process of claim 1 ~~14~~ wherein expression is determined for at least 5 said genes.

17. (Currently Amended) The process of claim 1 ~~14~~ wherein expression is determined for at least 10 said genes.

18. (Currently Amended) The process of claim 1 ~~14~~ wherein expression is determined for all said genes of step (a).

19. (Currently Amended) A process for identifying an anti-neoplastic agent comprising contacting a cell exhibiting neoplastic activity with a compound first identified as a cancer related gene modulator using a process of one of ~~claims 1 18~~ claim 1 and detecting a decrease in said neoplastic activity after said contacting compared to when said contacting does not occur.

20. (Original) The process of claim 19 wherein said neoplastic activity is accelerated replication.

21. (Original) The process of claim 19 wherein said decrease in neoplastic activity results from the death of the cell.

22. (Currently Amended) A process for identifying an anti-neoplastic agent comprising administering to an animal exhibiting a cancer condition an effective amount of an agent first identified according to a process of one of ~~claims 1-21~~ claim 1 and detecting a decrease in said cancerous condition.

23. (Original) A process for determining the cancerous status of a cell, comprising determining the level of expression in said cell of at least one gene that corresponds to a polynucleotide having a sequence selected from the group consisting of SEQ ID NO: 1 – 583 wherein an elevated expression relative to a known non-cancerous cell when the sequence is one of SEQ ID NO: 1-105 and 300-583 or a reduced expression relative to a known non-cancerous cell when the sequence is one of SEQ ID NO: 106-299 indicates a cancerous state or potentially cancerous state.

24. (Original) The process of claim 23 wherein cDNA of the gene has the sequence of SEQ ID NO: 1-583.

25. (Currently Amended) The process of claim 23 ~~or 24~~ wherein said expression is the expression of more than one said gene.

26. (Currently Amended) The process of claim 23 ~~or 24~~ wherein said expression is the expression of at least 5 said genes.

27. (Currently Amended) The process of claim 23 ~~or 24~~ wherein said expression is the expression of at least 10 said genes.

28. (Currently Amended) The process of claim 23 ~~or 24~~ wherein said expression is the expression of all said genes.

29. (original) A process for determining if a test gene is a cancer initiating or

facilitating gene comprising contacting a cell expressing said test gene with an agent that decreases the expression of a gene that corresponds to a polynucleotide having a sequence selected from the group consisting of SEQ ID NO: 1-105 and 300-583, and detecting a decrease in expression of the test gene compared to when said agent is not present, thereby identifying said test gene as being a cancer initiating or facilitating gene.

30. (Original) The process of claim 29 wherein the gene determined by said process is an oncogene.

31. (Original) The process of claim 29 wherein the gene determined by said process is a cancer facilitating gene.

32. (Original) The process of claim 29 wherein said decrease in expression is due to a decrease in copy number of said gene in said cell or a cell derived from said cell.

33. (Original) A process for determining if a test gene is a cancer suppressor gene comprising contacting a cell expressing said test gene with an agent that increases the expression of a gene that corresponds to a polynucleotide having a sequence selected from the group consisting of SEQ ID NO: 106-299 and detecting an increase in expression of said test gene compared to when said agent is not present, thereby identifying said test gene as being a cancer suppressor gene.

34. (Original) The process of claim 33 wherein said increase in expression is due to an increase in copy number of said gene in said cell or a cell derived from said cell.

35. (Original) A process for treating cancer comprising contacting a cancerous cell with an agent having activity against an expression product encoded by a gene

sequence selected from the group consisting of SEQ ID NO: 1 – 105 and 300-583.

36. (Original) The process of claim 35 wherein said cancerous cell is contacted *in vivo*.

37. (Original) The process of claim 35 wherein said agent has affinity for said expression product.

38. (Original) The process of claim 37 wherein said agent is an antibody.

39. (Original) The process of claim 35 wherein said agent is an apoptosis-inducing agent.

40. (Canceled)

41. (Original) A process for treating a cancerous condition in an animal afflicted therewith comprising administering to said animal a therapeutically effective amount of an agent first identified as having anti-neoplastic activity using the process of claim 22.

42. (Original) A process for protecting an animal against cancer comprising administering to an animal at risk of developing cancer a therapeutically effective amount of an agent first identified as having anti-neoplastic activity using the process of claim 22.

43. (Currently Amended) The process of claim 41 ~~or 42~~ wherein said cancer is thyroid cancer.

44. (Currently Amended) The process of claim 41 ~~or 42~~ wherein said cancer is a carcinoma.

45. (Currently Amended) The process of claim 41 ~~or 42~~ wherein said cancer is thyroid papillary carcinoma.

46. (Original) A process for determining functionally related genes comprising contacting one or more gene sequences selected from the group consisting of the sequences of SEQ ID NO: 1 – 583 with an agent that modulates expression of more than one gene in such group and thereby determining a subset of genes of said group.

47. (Original) The process of claim 46 wherein said functionally related genes are genes modulating the same metabolic pathway.

48. (Original) The process of claim 46 wherein said genes are genes encoding functionally related polypeptides.

49. (Original) The process of claim 46 wherein said all of genes are genes whose expression is modulated by the same transcription activator or enhancer sequence.

50. (Original) The process of claim 46 wherein said sequences are selected from SEQ ID NO: 1-105.

51. (Original) The process of claim 46 wherein said sequences are selected from SEQ ID NO: 106-299.

52. (Original) The process of claim 46 wherein said sequences are selected from SEQ ID NO: 300-583.

Please add the following new claims:

53. (New) The process of claim 1 wherein said gene comprises a nucleotide sequence selected from SEQ ID NO: 1-1392.

54. (New) A method for producing test data with respect to the cancer-related gene modulating activity of a compound comprising:

(a) contacting a compound with one or more cells containing a polynucleotide comprising a nucleotide sequence corresponding to a gene whose expression is increased in a cancerous cell over that in a non-cancerous cell or a gene whose expression is elevated in a non-cancerous cell over that in a cancerous cell and under conditions wherein said polynucleotide is being expressed, and

(b) determining a change in expression of more than one of said polynucleotides as a result of said contacting, and

(c) producing test data with respect to the gene modulating activity of said compound based on an increase in the expression of the determined genes whose expression is otherwise elevated in a non-cancerous cell over that in a cancerous cell and a decrease in the expression of the determined genes whose expression is otherwise increased in a cancerous cell over that in a non-cancerous cell indicating cancer-related gene modulating activity.